

# Traditional Practices among Rural Women to Relieve Their Common Pregnancy Minor Discomforts: A Descriptive Study

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## **Abstract**

**Background:** Pregnancy is a normal process that results in a series of both physiological and psychological changes in women that require adjustment and adaptation on the part of the mother. The observable result of physiological changes is minor discomforts. The most common discomforts are morning sickness, heartburn, constipation, backache, and leg cramps. Although minor discomforts are non-serious, their presences detract from the mother feeling of comfort and well-being in many instances they can be avoid by preventive measures or healthful practices once they do occur. **Aim:** This study was done to assess the practices adopted by rural pregnant women to relive their common minor discomforts. **Subject & Methods:** The study was conducted at six maternal and child health centers in El-Mahalla Elkobra. A sample of 300 pregnant women was selected. Data were collected by an interview questionnaire. **Results:** the mean age of mothers was  $27.44 \pm 5.36$ , 61.0% of them had 3 pregnancies or more, 76.7% used antenatal care services during their previous pregnancies, and 74.4% of the study subjects had irregular follow-up visits. The majority of them used harmful measures to overcome their minor discomfort than useful ones. Women's mothers were the main sources of women's information about practices to overcome common minor discomforts. Significant statistical relationships were observed between traditional practices to overcome common minor discomforts and some times of women's characteristics as educational level, occupational status, age at marriage, family income and utilization of antenatal care services by the studied subjects. **Conclusion:** Most of the rural dwellers used traditional measures to relieve associated pregnancy minor discomforts. Traditional practices among pregnant women to relieve common minor discomfort during pregnancy in

*the rural area tended to be more harmful than useful ones. Usage of traditional practiced affected by women's education, occupation, age at marriage, family income, and regular utilization of ANC services. **Recommendations:** Continuous education and training programs about pregnancy and its accompanied minor discomforts should be conducted for physicians, nurses, midwives, and TBAs to manage minor discomforts. Measures to combat women's delay in initiation antenatal care services should be taken.*

**Keywords**

*traditional practices, rural women, minor discomforts, useful practices, harmful practices*

**1. Introduction**

There is an estimated 200 million pregnancy in the world, every year. Pregnancy is a normal process that results in a series of both physiological and psychological changes in women. Pregnancy isn't a disease; it is a normal, unique and powerful experience. During pregnancy, a series of enormous physical, hormonal and emotional changes take place over a relatively short period of time. The body has to adapt to carry up to 20 lb of baby, water, and placenta, which can impose physical strain on all the organs and tissues (Stump, 2002; Hassan, 2005).

Minor discomfort was defined by Beischer and Mackay (1989) as slightly ailments of pregnancy which lead to lack of comfort and annoying rather than disabling the client. Minor discomforts of pregnancy are commonly experienced by most of the expectant mothers, to some degree, in the course of a normal pregnancy. Not all women experience those discomfort, but some go through the entire antenatal period without any (Reader et al., 1992). Minor discomforts during pregnancy are the result of physiologic, anatomic, endocrinal, metabolic and/or postural changes as the body accommodate to pregnancy (Hassan, 2005; Chamberlain & Pearce, 1992).

Although minor discomforts are neither serious nor life threatening, nevertheless their presence detracts from the mother feeling of comfort and well-being as well as their negligence may lead to serious problems. In many instances, they can be avoided by preventive measures or healthful practices once they do occur (Reader et al., 1992).

Every system of the body is adjusted and affected by pregnancy. In order to make reference easy, the disorders will be dealt with by systems (Chamberlain & Pearce, 1992). Nausea, vomiting, heartburn, excessive salivation (ptyalism), Pica, bleeding gums, constipation, flatulence and hemorrhoids referred to digestive system (Olds et al., 2004). Upper and lower backache (non-pathological), leg cramps and fatigue are most common for the musculoskeletal system. Genitourinary system is affected in the form of the frequency of micturition (non-pathological), leucorrhea (vaginal discharge), nocturia, dyspareunia, and round ligament pain. While syncope (fainting), anemia and weakness, swelling of feet, dependent edema of lower extremities and varicose vein referred to the circulatory system. Cholasma, stretch marks, generalized itching which starts over the abdomen are usually referred to skin

system. Carpal tunnel syndrome, insomnia, tingling and numbness of fingers referred to the nervous system. Non-pathological hyperventilation and shortness of breath and nasal stuffiness referred to the respiratory system (Leifer, 2003). Although all the previously mentioned minor discomforts occur during pregnancy, the most common are morning sickness, heartburn, and constipation, backache and leg cramps (Hassan, 2016).

### *1.1 Significant of the Study*

Traditional practices are the care including anything that individuals do on their own behalf to promote or improve their health status. They can include traditional medical practices, folk or popular remedies. Traditional ideas pass from one generation to another, but some of them can be modified by new experiences and new knowledge. Frequency of using traditional practices is due to the convenience and the cost of seeking professional guidance. Many factors affect traditional practices such as culture, religion, ethnicity, age, early marriage, socio-economic status, education, attitudes and beliefs, support system and traditional birth attendants (Pinnel, 1996).

In ancient Egypt, physicians depended on home plants, vegetables, minerals, and animals in dealing with health problems. They prescribed remedies in many forms as pills, cakes, suppositories, ointments, drops, gargles, fumigation, and baths. The liquid vehicles were water, milk, beer, and wine, each sweetened with honey, and the ingredients were expected to remedy a variety of problems, not just the illness (Pinnel, 1996).

Home remedies are derived from traditional healing beliefs and methods used in the past and contemporary cultures mostly by people who are not licensed as medical practitioners. The word “traditional” has been described as a particular group’s norms and practices that are learned and shared, which guide thinking, decision, and actions. There are other terms that are used as synonyms for the term traditional as indigenous, alternative, folk, ethnic, and unofficial. Traditional medicine is usually used and prescribed by traditional practitioners “healers” and/or indigenous midwives called “dayas”, who are responsible mainly for home deliveries (Cattel, 1999).

Although medical health professionals often term to these discomfort as minor and pay little attention to these nuisances, they are not minor to the pregnant woman. As the pregnant who is experiencing them and make them quite uncomfortable especially if they occur daily and make her wonder if she will ever feel like herself again (Mc-cann et al., 2004). The nurse, physician and other specialized personnel collaborate in providing services for pregnant women. The nurse-midwife is defined as skilled birth attendants who have completed a set course of study and is registered and legally licensed to practice midwifery (Hassan, 2016). As nurses comprise the greatest group of health care providers and are the ones responsible for the quality of care provided to the patients, their perspectives on the effectiveness of their care are very important. A vast majority of researches describe and focus on maternity nurse role in different settings (Hassan & Farag, 2019; Sheha, et al., 2018; Hassan, 2018; Mostafa et al., 2018; Gamel et al., 2019; Hassanine et al., 2017; Hassan, 2016; Atwa et al., 2019; Hassan et al., 2019; Hassan, 2016; Emam et al., 2019; Hassan & Nasr, 2017; Faheim et al., 2019;

Hassan, 2019; Farg & Hassan, 2019; Hassan, 2019; Farag & Hassan, 2019). They act as a technical specialist, researcher, teacher and consultant sometimes they also play an administrative role with the pregnant total health care experiences (Hassan, 2016).

Endogenous or traditional practices constitute one type of folk medicine. They are found in almost every household and are given various degrees of importance by mothers. The maternity nurse is in a unique position to assist in the prevention and adopting minor discomforts through their health education and counseling, which are very crucial nursing tasks. Understanding women's practices to their minor discomforts is necessary since pregnant women behave in different ways to control these discomforts. Therefore, this study was done to explore the practices adopted by pregnant women to relieve their common minor discomforts. By revealing these practices, it would be possible to exclude harmful practices and encourage useful ones.

### *1.2 Aim of the Study*

This study aimed to assess the traditional practices among rural residence, pregnant women, to overcome their common minor discomforts during pregnancy (morning sickness, heartburn, constipation, backache, and leg cramps).

### *1.3 Research Questions of the Study*

- 1) What are the traditional minor discomfort relieving-measures practiced by rural pregnant women to overcome their common minor discomforts during pregnancy?
- 2) Which ones of those traditional-relieving-measures practiced by pregnant women are useful?
- 3) Which ones of those traditional-relieving-measures practiced by pregnant women are harmful?

## **2. Subjects and Methods**

### *2.1 Research Design*

Exploratory descriptive study design was used.

### *2.2 Subjects & Setting*

#### *2.2.1 Setting*

The study was conducted in six Maternal and Child Health Centers representing the different health zones concerned with the provision of maternity care to different districts within the city of Elmahala Elkobra and the surrounding rural areas. In addition, their clients are of various socio-economic and cultural backgrounds. These MCH centers are:

- 1) Mahalla Awal MCH center.
- 2) Mahalla Tany MCH center.
- 3) Shobra Babel MCH center.
- 4) Shobra Malkan MCH center.
- 5) Zayad MCH center.
- 6) Abo Ali MCH center.

### 2.2.2 Subjects

A purposive sample comprised 300 pregnant women; 50 from each of the previously mentioned settings. The study subjects were selected from pregnant women who fulfilled the following criteria:

- 1) Multipara.
- 2) Free from any medical diseases.
- 3) Free from any obstetrical complications with pregnancy.
- 4) Free from any medical diseases family history as D.M., hypertension.

### 2.3 Tools of Data Collection

A specially designed interview schedule was developed based on the review of literature. It was used by the researcher to collect the necessary data about the study subjects. It entailed the following items:

**I- Socio-demographic data:** It comprised data about the study subjects such as; age, level of education, occupation, size and type of family, age at marriage and family income.

**II- Obstetrical Characteristics:** This includes gravidity, parity, and number of previous abortion.

**III- History of present pregnancy:** This includes the last menstrual period, expected date of delivery, weeks of gestation.

**IV- Data related to antenatal follow up:** This part included the number of visits during the present pregnancy and previous pregnancies.

**V- History of minor discomfort:** History of minor discomforts during present pregnancy and previous pregnancies, women practices to overcome these common minor discomforts and the sources of their information is comprised in this part.

### 2.4 Administrative and Ethical Considerations

Official letter clarifying the purpose of the study was obtained from the Faculty of Nursing and forwarded to the concerned persons at the previously mentioned research settings to have their approval. The purpose of the study was explained to each woman, and then her verbal consent to participate in the study was obtained. The interviews were carried out according to the interview schedule. The average number of the interview was 4 to 5 women per day and the time taken for each sheet to be completed was 10-20 minutes depending upon the degree of understanding and response of the interviewee. Only one interviewer was responsible for collecting the data during the whole period of the study. The process of data collection consumed three months, from the first of December 2003 till the end of February 2004. Each of the six settings was visited once per week from 9 am to 12 noon.

### 2.5 Validity and Reliability of the Tool

The interview schedule was developed after an extensive review of the related literature. The tool was revised for content validity by ten experts in the field of maternity nursing, obstetrics and gynecological nursing, obstetrics and gynecological medicine. They were senior academic staff members at Tanta and Alexandria University. The recommended modifications were done consequently. The Cronbach's alpha for reliability was 0.77.

## 2.6 Pilot Study

The pilot study was carried out on 10.0% of the studied women in the study setting (that were excluded from the study sample) to test the applicability, clarify and the feasibility of the study tools as well as to estimate the time needed to complete the tools. It also helped to find out any obstacles and problems that might interfere with data collection, based on findings of the pilot study, certain modifications of the tools were done. Following this pilot study, the process of data collection was performed.

## 2.7 Statistical Analysis

After data were collected, they were coded and transferred to special designed formats to be suitable for computer feeding. Following data entry, checking and verification processes were carried out to avoid any errors during data entry. Frequency analysis, cross tabulation, and manual revision were all used to detect any errors. The EPI INFO statistical program was utilized for both data presentation and statistical analysis of the results. The level of significance selected for this study was P equal to or less than 0.05. The following statistical measures were used:

- 1) Descriptive measures included count, percentage, arithmetic mean, SD, minimum, and maximum.
- 2) Statistical tests included: Chi-square test for analysis of qualitative variables.
- 3) The graphical presentation included Pie-chart & Column-chart diagrams.

## 3. Results

Table 1 illustrates the distribution of the study subjects according to their socio-demographic characteristics. It was found that the mean age of mothers was  $27.44 \pm 5.36$ . Nearly one-half of the study subjects (48.0%) had less than university education. The majority of the study subjects (83.7%) were housewives. The majority of mothers (97.7%) were married. It was obvious the mean age of marriage was  $22.02 \pm 5.53$ . It was observed that more than two third of the study subjects (69.0%) had extended family, the mean family size was  $4.45 \pm 2.07$ . The same table that the majority of the study subjects (89.0%) did not have enough family income, while only 11.0% of them had enough family income.

Table 2 shows the distribution of the study subjects according to their obstetrical characteristics. The table revealed that slightly more than three-fifth (61.0%) of them had 3 pregnancies or more. The majority of the study subjects (83.3%) had less than 3 deliveries. Two-thirds (66.7%) of the study subjects had not aborted previously.

Table 3 presents the utilization of antenatal care services by the study subjects during their previous pregnancies. It was found that slightly more than three-fourths of them (76.7%) used antenatal care services during their previous pregnancies. It was noticed that 57.8% of the study subjects received their care at private clinics, 23.0% at M.C.H centers. More than half of the study subjects (56.5%) had less than 4 antenatal visits during their previous pregnancies. The main reason for seeking antenatal care as mentioned by most (43.9%) of the study subjects was to assure their well-being and that of their fetus. Concerning reasons for not seeking antenatal care, it was noticed that more than around one-fifth (22.9%, 22.9% & 22.9%) of women mentioned that they had lack of awareness about antenatal care

services, had no health problems during their pregnancies, and had lack of money respectively.

Table 4 presents the distribution of the study subjects according to their regularity of antenatal follow-up visits during their current pregnancy. It was noticed that about three-quarters (74.4%) of women had irregular follow-up visits, while slightly more than a quarter (25.6%) had regular follow-up visits.

Figure 1 shows the distribution of the study subjects according to the occurrence of common minor discomforts during their previous and present pregnancies. It was observed that more than two-thirds (70.0%) of the study subjects had morning sickness during their previous pregnancies, while three-fifths (60.0%) experienced it during their current pregnancy. More than three-fifths (64.0%) of the subjects had heartburn during their previous pregnancies and 52.7% during their current pregnancy. Constipation was a complaint in more than half (53.0% & 51.0%) of the subjects during their previous pregnancies and current pregnancy respectively. More than half (58.3%) of the subjects suffered from backache in their previous pregnancies, while less than two-thirds (63.3%) suffered during their current pregnancy. Leg cramps were experienced by more than half (51.3% & 55.3%) of the study subjects during their previous and their current pregnancy respectively.

Figure 2 shows the distribution of the study subjects according to their practices to relieve common minor discomforts. In general, it was observed that the majority of them used harmful measures to overcome their minor discomforts than useful ones. As regards women's practices to relieve morning sickness, it was found that the majority of them used harmful measures to overcome morning sickness; 33.3% of the study subjects ate salty foods and pickles and 24.0% decreased fluid intake. Regarding useful practices, it was noticed that 13.7% of the study subjects used useful herbs in the form of anise, caraway, and fennel. As regards heartburn, it was reported that 40.7% practiced harmful measures in form of ate lettuce or green fenugreek compared to 23.3% of the subjects who practiced useful ones in form of drank hot milk and took yogurt. For women's practices to relieve constipation, nearly a quarter of study subjects (24.0%) practiced harmful measures. they used rolled oily paper by paraffin oil as an anal lubricant. Regarding useful practices, 14.3%, 11.3% & 5.0% of the study subjects used to eat more fresh vegetables, chicory, and fruits, increased fluid intake and took yogurt respectively. According to women's practices to relieve backache, as regards the harmful practices, it was found that 23.7% of the subjects used container of earthenware (air cups) on the back. Regarding useful practices as sleeping at a comfortable position on the back on a firm surface, it was noticed that 22.3% of the study subjects used it to relieve backache. Finally, the same figure portrays women's practices to relieve leg cramps. As regards the harmful practices, it was observed that 28.3% of the study subjects applied tight pressure by cloth on the affected leg. Concerning useful practices, the same figure illustrates that 10.0% of the study subjects massaged their affected leg to relieve this minor discomfort.

Figure 3 summarizes sources of women's information about practices to overcome common minor discomforts. It was observed that 40.0% of the study subjects had their information from their mothers. While less than one fifth (19.7% & 17.0%) of them had such information from the mother-in-law and

traditional birth attendances (TBAs) respectively and 9.0% of them stated that their sources of information about traditional practices were from friends and neighbors. Only 7.0 % acquired their information from herbal traders and the least source stated by them about these practices were mass media and physician or nurse 4.0% & 3.3% respectively.

Figure 4 shows the distribution of the study subjects according to the reasons for preferring traditional practices to relieve their minor discomforts. It was noticed that 25.3%, 24.7% & 18.7% of the study subjects mentioned that those practices were recommended by relatives, had no side effects and easy to use and they can do those practices by themselves without prescription respectively. Only 3.3% stated that these methods were available at home at any time.

Table 5 presents the relationship between socio-demographic characteristics of the study subjects and their practices to relieve minor discomforts. Regarding the relationship between age of the studied subjects and their practices to relieve their common minor discomforts, it was noticed that a substantial proportion of women used harmful practices regardless of their age in relation to morning sickness, heartburn, constipation, backache, and leg cramps; no significant difference between the age of the studied subjects and their practices to relieve their minor discomforts. As regards the relationship between the level of education of studied subjects and their practices to relieve their minor discomforts, it was found that women practices regarding morning sickness and heartburn were significantly related to their education ( $X^2=8.442$ ,  $p=0.0157$  &  $X^2=13.987$  and  $p=0.0073$ ), respectively. The same table also showed that women's education was not significantly related to their practices to relieve constipation ( $X^2=5.115$ ,  $p=0.2757$ ), backache ( $X^2=3.466$ ,  $p=0.4831$ ) and leg cramp ( $X^2=1.490$ ,  $p=0.8284$ ). For the relationship between the occupation of the studied subjects and their practices to relieve minor discomforts, it was noticed that women who were housewives practiced harmful measures to overcome their minor discomforts compared to working ones. It was found that women's occupation was significantly related to their practices to relieve morning sickness ( $X^2=8.306$ ,  $p=0.0157$ ). A significant difference was observed between the occupation of the studied subjects and their practices to relieve constipation ( $X^2=7.189$ ,  $p=0.0275$ ). The table also showed that women's occupation was not significantly related to their practices to relieve heartburn ( $X^2=1.691$ ,  $p=0.4294$ ), backache ( $X^2=2.034$ ,  $p=0.3617$ ) and leg cramp ( $X^2=0.069$ ,  $p=0.9659$ ).

Regarding the relationship between the age at marriage of the studied subjects and their practices to relieve minor discomforts, it was noticed that women who were married at age of less than 20 years old used harmful practices to relieve their minor discomfort than other counterparts. It was also clear that women's age at marriage was not significantly related to their practices to relieve morning sickness ( $X^2=0.931$ ,  $p=0.6279$ ) and constipation ( $X^2=2.561$ ,  $p=0.2778$ ). The same table also shows that women's practices to relieve backache and leg cramp did not seem to be related to their age at marriage (backache  $X^2=3.449$ ,  $p=0.1781$ ) and leg cramp ( $X^2=0.023$ ,  $p=0.9885$ ).

The same table presented the relationship between family income of the studied subjects and their practices to relieve minor discomforts. It was noticed that more than two-thirds, most of the women



whose family income was always not enough, sometimes not enough and enough and can save from it respectively, used harmful practices to relieve their minor discomforts compared to their counterparts whose income was just enough or enough and can save from it. A significant difference was observed between the family income of the study subjects and their practices to relieve heartburn and constipation, where ( $X^2=21.437$ ,  $p=0.0015$ ) and ( $X^2=17.143$ ,  $p=0.0087$ ) respectively. The table also showed that women's family income was not significantly related to their practices to relieve morning sickness ( $X^2=8.646$ ,  $p=0.1644$ ) or backache ( $X^2=1.424$ ,  $p=0.9644$ ) and leg cramp ( $X^2=1.513$ ,  $p=0.9586$ )

Table 6 presents the relationship between the parity of the studied subjects and their practices to relieve minor discomforts. It was noticed that a substantial proportion of women used harmful practices in relation to morning sickness, heartburn, constipation, and backache and leg cramp regardless of their parity. No significant differences were observed between the parity of the studied subjects and their practices to relieve their minor discomfort.

Table 7 presented the relationship between the utilization of antenatal care services and their practices to relieve these minor discomforts. Firstly, regarding the relationship between utilization of antenatal care services by the studied subjects in their previous pregnancies and their practices to relieve minor discomforts, it was noticed that most of those who didn't utilize antenatal services and those who utilized it less than four visits, respectively, used harmful practices to relieve heartburn compared to those who utilized it four visits or more. Additionally, the majority of those who didn't utilize antenatal care services used harmful practices to relieve backache compared to counterparts who utilized antenatal services four visits or more and less than four visits, respectively. A positive significant relation was found between utilization and number of antenatal care services by the studied subjects in their previous pregnancy and their practices to relieve heartburn and backache ( $X^2=10.1079$ ,  $p=0.0387$ ) and ( $X^2=14.742$ ,  $p=0.0052$ ) respectively. The same table showed that the number of antenatal visits of studied subjects in their previous pregnancy was not significant in relation to practices to relieve morning sickness ( $X^2=3.91511$ ,  $p=0.41762$ ), constipation ( $X^2=5.5133$ ,  $p=0.2386$ ) and leg cramp ( $X^2=4.317$ ,  $p=0.3648$ ). Secondly, regarding the relationship between regularity of utilization antenatal care services by study subjects in their current pregnancy and their practices to relieve minor discomfort, it was noticed that a presentable percentage of women who were irregular in their utilization of antenatal care services used harmful practices to relieve morning sickness compared to others who regularly utilized them. The observed difference was statistically significant, where  $X = 36.893$  &  $p < 0.001$ . Concerning heartburn it was observed that the difference was statistically significant, where  $X^2 = 114.068$  &  $p < 0.001$ . The same table showed a significant difference between irregular visits of antenatal care services and women's practices to relieve constipation ( $X^2=10.286$  &  $p=0.0058$ ) and backache ( $X^2=5.338$ ,  $p=0.0693$ ) as well as leg cramps ( $X^2=11.871$  &  $p=0.0026$ ).

**Table 1. Distribution of the Study Subjects according to Their Socio-Demographic Characteristics**

Age in years	No	%
<25	107	35.7
≥25	193	64.3
Mean ±SD	27.44 ± 5.36	
Level of education		
Illiterate, Just read & write	123	41.0
Less than university	144	48.0
University	33	11.0
Occupation		
Housewife	251	83.7
Working	49	16.3
Marital status		
Married	293	97.7
Divorced	3	1.0
Widowed	4	1.3
Age at marriage		
<20 years	116	38.7
≥20 years	184	61.3
Mean ±SD	22.02 ± 5.53	
Type of family		
Nuclear	93	31.0
Extended	207	69.0
Family size		
Range	2 – 18	
Mean ±SD	4.45 ± 2.07	
Family income		
Enough & can save from it	12	4.0
Just enough (enough for living only)	21	7.0
Sometimes not enough	148	49.3
Always not enough	119	39.7

**Table 2. Distribution of the Study Subjects according to Their Obstetrical Characteristics**

<b>Gravidity</b>	<b>No</b>	<b>%</b>
<3	117	39.0
≥3	183	61.0
<b>Parity</b>		
<3	250	83.3
≥3	50	16.7
<b>Number of abortion</b>		
0	200	66.7
1	60	20
≥2	40	13.3

**Table 3. Distribution of the Study Subjects according to Their Utilization of Antenatal Care Services during Their Previous Pregnancy**

<b>Utilization of antenatal care services during the previous pregnancy (n = 300)</b>	<b>No</b>	<b>%</b>
No	70	23.3
Yes	230	76.7
<b>Location for antenatal care service (n = 230)</b>		
Private clinics	133	57.8
M.C.H. centers	53	23.0
Primary health care units	31	13.5
Governmental hospitals	13	5.7
<b>Number of antenatal visits (n = 230)</b>		
<4 visits	130	56.5
≥ 4 visits	100	43.5
<b>Reasons for seeking antenatal care #</b>		
Assure well-being of fetus & mother	101	43.9
Treat pregnancy health problems	60	26.1
Take tetanus vaccination	52	22.6
Avoid pregnancy complication & get referral if there is any health problem	35	15.2
Confirmation of pregnancy	28	12.2
Being first pregnancy	21	9.1
Perform lab investigations	18	7.8
Register for delivery at the center	7	3.0
<b>Reasons for not seeking antenatal care #</b>		
Lack of awareness related to antenatal care services	16	22.9

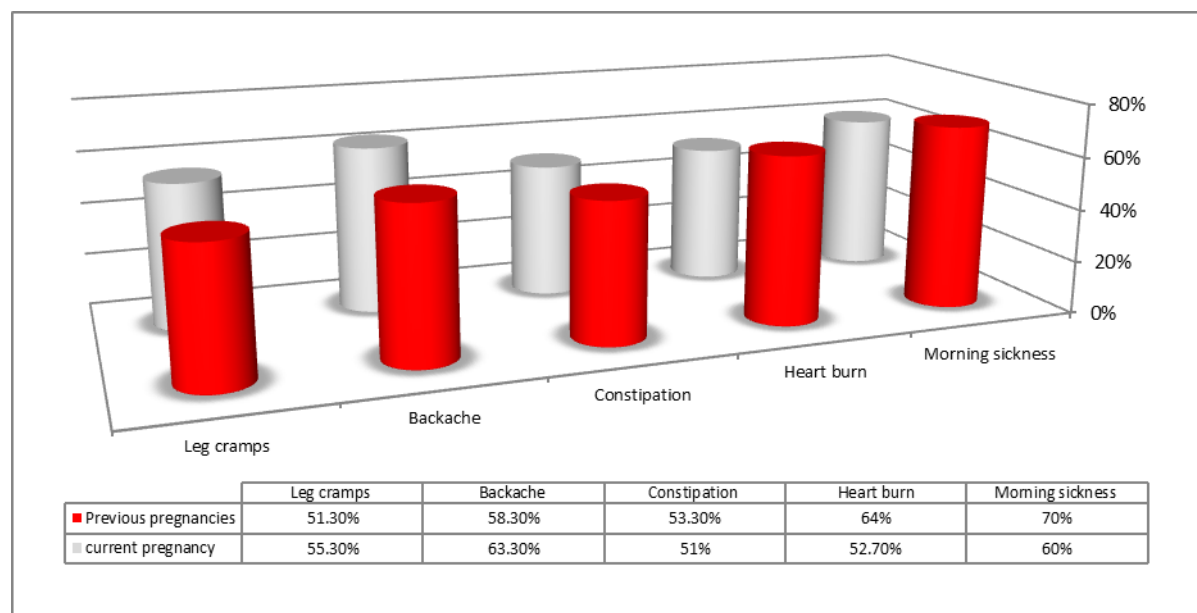
Absence of health problems	16	22.9
Lack of money (Financial factor)	16	22.9
Have no decision making power	14	20.0
Don't like medical examination	6	8.6
Having enough experience from previous Pregnancies	6	8.6
Waste of time (Long waiting & overcrowding center)	4	5.7
Difficult transportation	4	5.7
For high risk cases only	1	1.4

# More than one answers

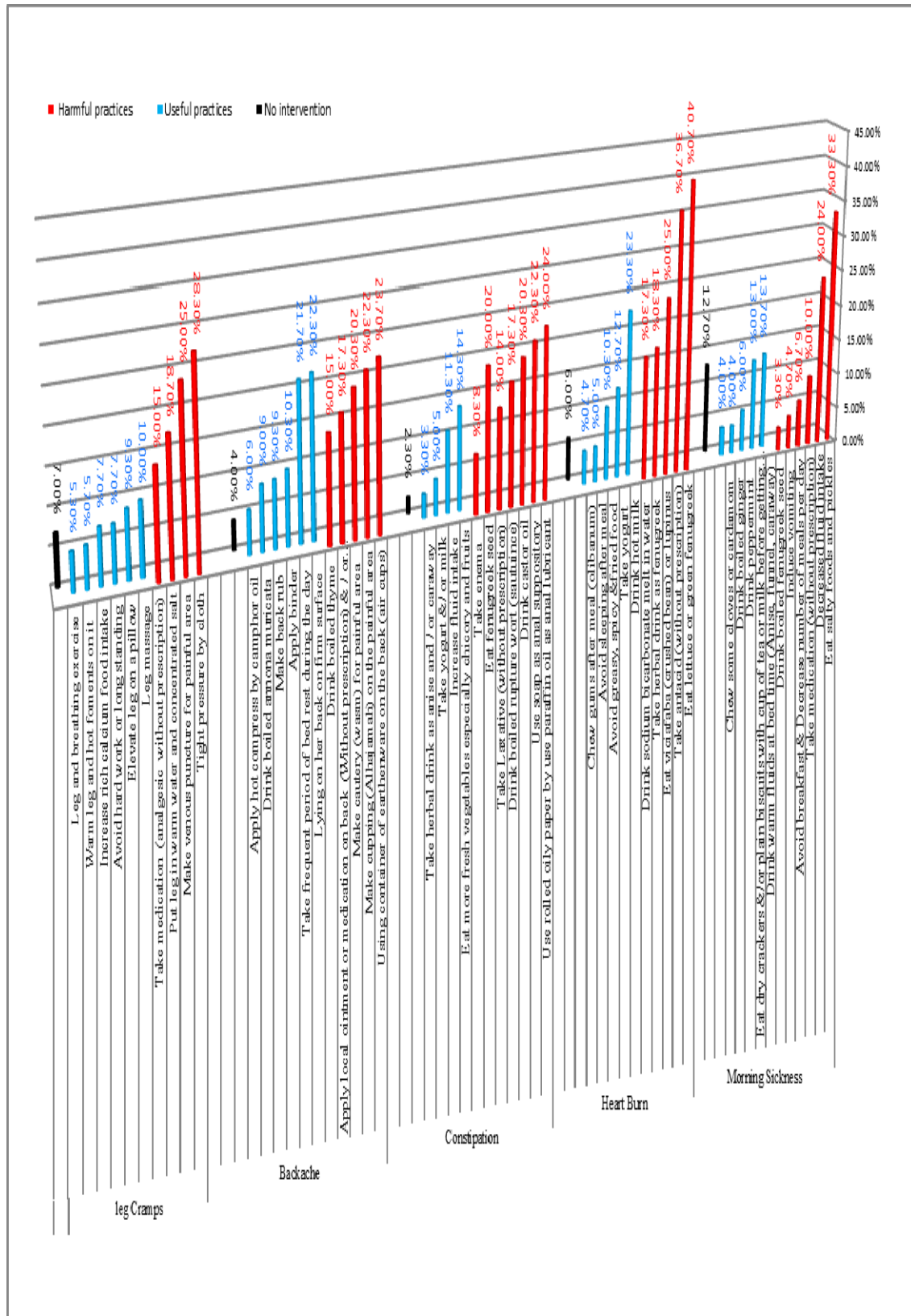
**Table 4. Distribution of Study Subjects according to Their Regularity of Antenatal Follow up Visits during Their Current Pregnancy**

Regularity of antenatal follow up visits ##	No = 300	%
Irregular	223	74.4
Regular	77	25.6

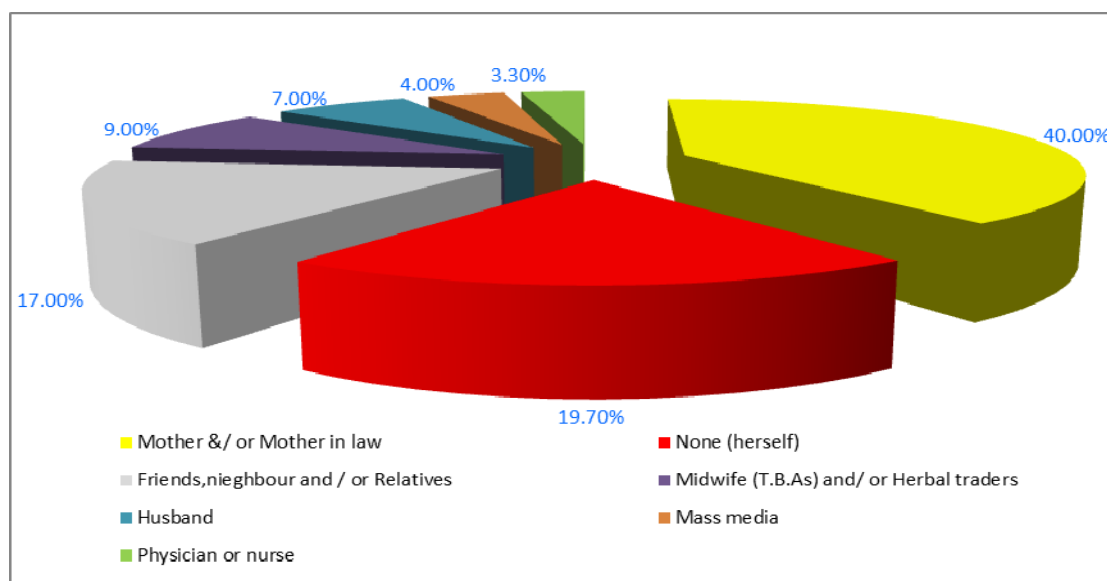
## Regular: Follow the schedule of antenatal visits, Irregular: Not follow the schedule of antenatal visits



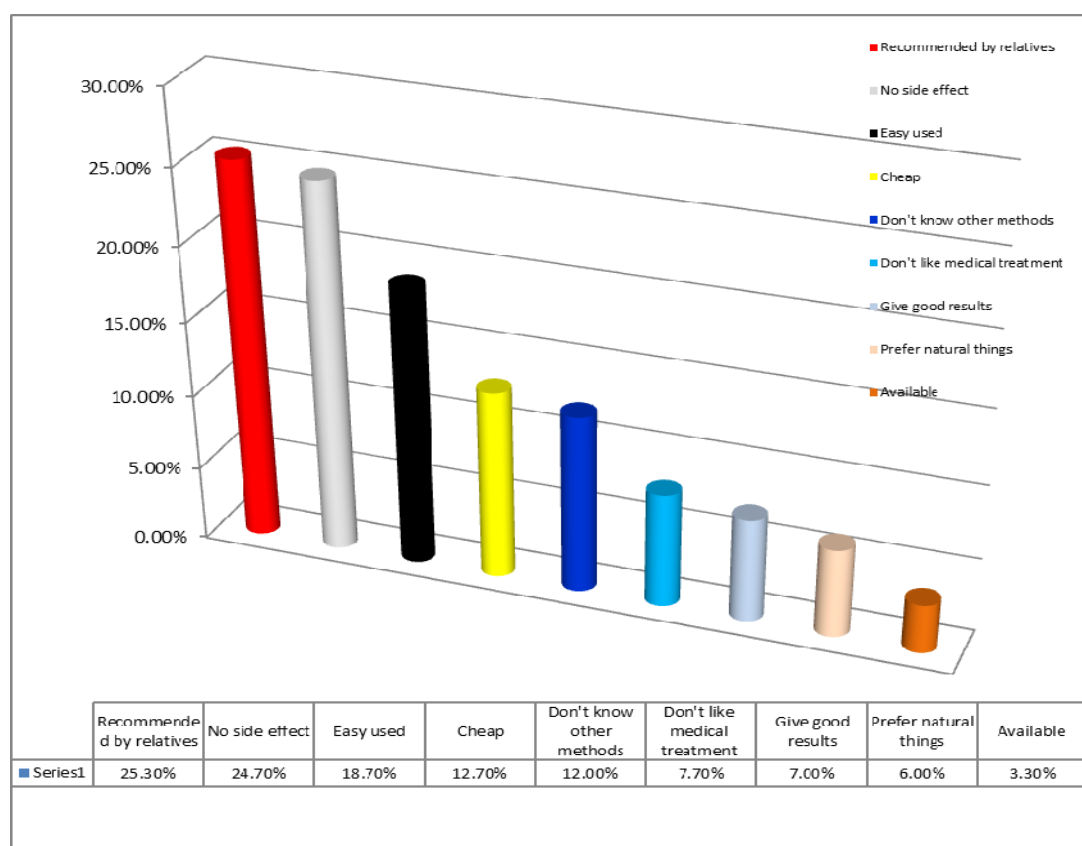
**Figure 1. Distribution of the Study Subjects according to the Occurrence of Common Minor Discomforts during Their Previous & Current Pregnancies**



**Figure 2. The Distribution of the Study Subjects according to Their Practices to Relieve Common Minor Discomforts**



**Figure 3. Common Sources of Information about Traditional Practices to Overcome Common Minor Discomforts**



**Figure 4. Reasons of the Study Subjects for Preferring Traditional Practices to Relieve Minor Discomforts**

**Table 5. The Relationship between Socio-Demographic Characteristics of the Study Subjects and Their Practices to Relieve Minor Discomforts**

Socio-Demographic characteristics of the study subjects																																			
Practices to relieve minor discomforts	Age				Level of education						Occupation				Age at marriage				Family income																
	<25		≥25		Test		Illiterate or just read & write		Less than university (n = 144)		University (n = 33)		Test		House wives (n= 251)		Working (n = 49)		Test		< 20 (n = 116)		≥ 20 (n = 184)		Test		Enough &can save from it (n = 12)		Sometimes Not enough (n = 148)		Always not enough (n = 119)		Test		
	(n = 107)		(n =193)		χ <sup>2</sup>		(p)				χ <sup>2</sup>		(p)				χ <sup>2</sup>		(p)				χ <sup>2</sup>		(p)						X2 (p)				
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%					
	Morning sickness																																		
Harmful	63	58.9	112	58.0	2.184		78	63.4	81	56.2	16	48.5	8.442		155	61.8	20	40.8	8.306		68	58.6	107	58.2	0.931		5	41.7	11	52.4	86	58.1	73	61.3	8.646
Useful	27	25.2	60	31.1	0.3355		33	26.8	39	27.1	15	45.5	0.0157*		65	25.9	22	44.9	1.691		31	26.7	56	30.4	11.397		3	25.0	5	23.8	47	31.8	32	26.9	
No-intervention	17	15.9	21	10.9	0.3355		12	9.8	24	16.7	2	6.0	0.0157*		31	12.3	7	14.3	0.0157*		17	14.7	21	11.4	0.6279		4	33.3	5	23.8	15	10.1	14	11.8	
Heart burn																																			
Harmful	69	64.5	114	59.1	1.054		87	70.7	82	56.9	14	42.4	13.987		157	62.5	26	53.1	1.691		82	70.7	101	54.9	11.397		6	50.0	6	28.6	88	59.5	83	69.7	21.437
Useful	33	30.8	66	34.2	0.5902		27	22.0	55	38.2	17	51.6	0.0073*		79	31.5	20	40.8	1.691		25	21.5	74	40.2	11.397		3	25.0	13	61.9	51	34.5	32	26.9	
No-intervention	5	4.7	13	6.7	0.5902		9	7.3	7	4.9	2	6.0	0.0073*		15	6.0	3	6.1	0.4294		9	7.8	9	4.9	0.0034*		3	25.0	2	9.5	9	6.0	4	3.4	
Constipation																																			
Harmful	80	74.8	144	74.6	1.571		95	77.2	108	75.0	21	63.6	5.115		193	76.9	31	63.3	7.189		90	77.6	134	72.8	2.561		8	66.7	11	52.4	104	70.3	101	84.9	17.143
Useful	23	21.5	46	23.8	0.4559		24	19.5	33	22.9	12	36.4	0.2757		51	20.3	18	36.7	7.189		22	19.0	47	25.6	2.561		4	33.3	10	47.6	40	27.0	15	12.6	
No-intervention	4	3.7	3	1.6	0.4559		4	3.3	3	2.1	0	0.0	0.2757		7	2.8	0	0.0	0.0275*		4	3.4	3	1.6	0.2778		0	0.0	0	0.0	4	2.7	3	2.5	
Back ache																																			
Harmful	61	57.0	101	52.3	2.197		74	60.1	72	50.0	16	48.5	3.466		140	55.8	22	44.9	2.034		70	60.4	92	50.0	3.449		5	41.7	12	57.1	80	54.0	65	54.6	1.424
Useful	40	37.4	86	44.6	0.3333		45	36.6	66	45.8	15	45.5	0.4831		101	40.2	25	51.0	2.034		41	35.3	85	46.2	3.449		6	50.0	8	38.1	63	42.6	49	41.2	
No-intervention	6	5.6	6	3.1	0.3333		4	3.3	6	4.2	2	6.0	0.4831		10	4.0	2	4.1	0.3617		5	4.3	7	3.8	0.1781		1	8.3	1	4.8	5	3.4	5	4.2	
Leg cramps																																			
Harmful	61	57.0	121	62.7	1.288		79	64.2	84	58.3	19	57.6	1.490		152	60.6	30	61.2	0.069		71	61.2	111	60.3	0.023		8	66.7	11	52.3	91	61.4	72	60.5	1.513
Useful	39	36.5	58	30.0	0.5253		35	28.5	50	34.7	12	36.4	0.8284		81	32.3	16	32.7	0.069		37	31.9	60	32.6	0.023		3	25.0	9	42.9	47	31.8	38	31.9	
No-intervention	7	6.5	14	7.3	0.5253		9	7.3	10	9.0	2	6.0	0.8284		18	7.1	3	6.1	0.9659		8	6.9	13	7.1	0.9885		1	8.3	1	4.8	10	6.8	9	7.6	

\*Significant, P < 0.05

**Table 6. Relationship between the Number of Parity of the Study Subjects and Their Practices to Relieve Minor Discomforts**

Practices to relieve minor discomforts	Parity				Test $\chi^2$ (p)
	<3(n = 250)		≥3(n = 50)		
	No	%	No	%	
<b>Morning sickness</b>					
Harmful practices	143	57.2	32	64.0	<b>0.869</b> <b>0.6477</b>
Useful practices	75	30.0	12	24.0	
No intervention	32	12.8	6	12.0	
<b>Heart burn</b>					
Harmful practices	147	58.8	36	72.0	<b>3.390</b> <b>0.1836</b>
Useful practices	88	35.2	11	22.0	
No intervention	15	6.0	3	6.0	
<b>Constipation</b>					
Harmful practices	187	74.8	37	74.0	<b>3.696</b> <b>0.1576</b>
Useful practices	59	23.6	10	20.0	
No intervention	4	1.6	3	6.0	
<b>Backache</b>					
Harmful practices	133	53.2	29	58.0	<b>2.578</b> <b>0.2756</b>
Useful practices	105	42.0	21	42.0	
No intervention	12	4.8	0	0.0	
<b>Leg cramps</b>					
Harmful practices	155	62.0	27	54.0	<b>1.616</b> <b>0.4458</b>
Useful practices	77	30.8	20	40.0	
No intervention	18	7.2	3	6.0	



**Table 7. Relationship between the Utilization of Antenatal Care Services and Their Practices to Relieve These Minor Discomforts**

Practices to relieve minor discomforts	Utilization of antenatal care services by study subjects in their previous pregnancy						Regularity of utilization antenatal care services by study subjects in their current pregnancy					
	Utilized antenatal services (n=230)				Not utilized antenatal services (n=70)		Test X <sup>2</sup> (p)	Irregular (n = 223)		Regular (n = 77)		Test X <sup>2</sup> (p)
	< 4 visits (n=130)		≥ 4 visits (n=100)		No	%		No	%			
	No	%	No	%						No	%	
Morning sickness												
Harmful practices	71	54.6	64	64.0	40	57.1	3.91511 0.41762	147	65.9	28	36.4	36.893 < 0.001*
Useful practices	44	33.8	22	22.0	21	30.0		48	21.5	39	50.6	
No intervention	15	11.6	14	14.0	9	12.9		28	12.6	10	13.0	
Heart burn												
Harmful practices	81	62.4	52	52.0	50	71.4	10.1079 0.0387*	173	77.6	10	13.0	114.068 < 0.001*
Useful practices	44	33.8	41	41.0	14	20.0		36	16.1	63	81.8	
No intervention	5	3.8	7	7.0	6	8.6		14	6.3	4	5.2	
Constipation												
Harmful practices	91	70.0	75	75.0	58	82.9	5.5133 0.2386	174	78.0	50	64.9	10.286 0.0058*
Useful practices	34	26.2	24	24.0	11	15.7		42	18.8	27	35.1	
No intervention	5	3.8	1	1.0	1	1.4		7	3.2	0	0.0	
Backache												
Harmful practices	61	46.9	50	50.0	51	72.9	14.742 0.0052*	126	56.5	36	46.8	5.338 0.0693
Useful practices	61	46.9	47	47.0	18	25.7		86	38.6	40	51.9	
No intervention	8	6.2	3	3.0	1	1.4		11	4.9	1	1.3	
Leg cramps												
Harmful practices	78	60.0	58	58.0	46	65.7	4.317 0.3648	148	66.4	34	44.1	11.871 0.0026*
Useful practices	41	31.5	38	38.0	18	25.7		62	27.8	35	45.5	
No intervention	11	8.5	4	4.0	6	8.6		13	5.8	8	10.4	

#### 4. Discussion

Pregnancy is a physiological process that is accompanied by various changes in all body systems. It also produces changes in body posture to allow fetal development inside the womb. These changes produce some minor discomforts like morning sickness, heartburn, constipation, backache, and leg cramps. They result from a series of enormous physiological, hormonal and emotional changes related

to the growing uterus and postural changes as the body accommodates to pregnancy. These minor discomforts can be troublesome, but most of them are self-limiting and disappear during pregnancy or after the birth of the baby (Gamel et al, 2019).

Throughout the world, the use of traditional medicine presents unique challenges in term of policy, efficacy, accessibility, and utilization (Lowdermilk & Perry, 2004). Traditional practices constitute a major influence on the health of the individual and of the community. Certain traditional practices are no doubt useful, others are harmless and some are positively dangerous. Traditional practices are more widely employed in developing countries, particularly those in rural areas, whose health facilities and health education are still beyond the reach of the majority of the population. These practices are deeply rooted in customary aspects (WHO, 1982). Egypt is one of the developing countries with its own traditions, cultures, philosophies, and religions which shaped people's understanding and conception of health (WHO, 1980).

Egyptian women especially who live in rural areas still stick to their old traditional and ancient pattern of life especially the inherited primitive prescriptions for the treatment of minor discomforts that occur during pregnancy. Some of these practices have proven benefits and should, therefore, be further promoted. Others are either useless or decidedly harmful and should obviously be discouraged (WHO, 1979). This study was an attempt to identify traditional practices which were practiced by pregnant women for relieving minor discomforts. It is an everlasting important area of interest which may have the greatest impact on the women's health during pregnancy and pregnancy outcome.

When common minor discomforts were investigated in the present study, it was found that morning sickness was the most significant and the first complaint during pregnancy. This result might be due to the fact that this symptom is most commonly experienced by pregnant women during early pregnancy. A similar finding was reported by Gowayed and Gamal El-Deen (1990) who stated that the occurrence of nausea and vomiting during pregnancy is a common complaint among women from both Alexandria and Tanta. A survey conducted by Scott et al, (2003) on pregnant women revealed that 66.0% of pregnant women in their first trimester had some degree of nausea, and 44.0% complained of vomiting. The results of the present study revealed that harmful practices to relieve morning sickness predominate over useful ones. Regarding harmful practices, it was found that the majorities of the studied subjects used to eat salty food and pickles, induce vomiting, drink boiled fenugreek seeds and take medication without a prescription, avoid taking breakfast, decrease the number of meals per day and reduce their fluid intake. This result reflects the impact of culture among Egyptian women in the rural area. They also had a lack of knowledge regarding the scientific information about nutrition in early pregnancy. This result is in line with Lowdermilk et al. (1999) and Gorrie et al. (1998) who stated that excessive intake of sodium should be discouraged during pregnancy as it may contribute to abnormal fluid retention and edema. Table salt (sodium chloride) and pickles are the richest sources for sodium. This result is also in congruence with Blumenthal et al. (2000) and Gruenwald et al. (1998) who denoted that fenugreek is not recommended during pregnancy since it reduces blood sugar level.

In addition, self-medication, as mentioned by Walker & Edward (1999), may have a serious impact on women's health. They either interfere with other prescribed drug regimen or cause an adverse drug reaction. Drife and Magowan (2004) added that no anti-emetic is licensed for use in pregnancy. Decreased fluid intake also may cause dehydration, constipation and increase the risk for urinary tract infection (Kaufman, 1995).

Considering useful practices, slightly more than two-fifths of the study subjects performed them in the form of drinking warm fluids like anise, funnel, peppermints, and ginger. In addition, to chewing clove, cardamom, and eating a dry cracker and/or plain biscuits with a small cup of tea or milk before getting from the bed was observed. This is expected as these herbs are present in the rural area and prescribed by herbal traders. This result is coinciding with Beal (1998) who stated that herbs as peppermint, fennel and ginger can be used in tea and have been cited as possible remedies for "morning sickness". Fontaine (2005) and Chez and Murphy (2001) added that Ginger products are part of the folk medicine for treating nausea. It is interesting to know that ginger is an herb used traditionally across culture for dealing with nausea and vomiting especially those associated with pregnancy. Two teaspoons of powdered or grated root using per cup of boiling water that is steeped for 20 minutes, strain, then adding the juice of half a lemon and honey to taste. The pregnant has to drink it warm and taken every 30 minutes up to 3 cups a day until the symptoms of morning sickness abated. In addition, peppermint has been a classic choice for treatment of nausea for hundreds of years. Anise (*Anethum graveolens*) and funnel (*Foeniculum vulgare*) are also mentioned as if taken in small amount may be helpful (Reader, 1992; Buckle, 1997). In addition, Cardamom is listed in the Indian material medical as checking vomiting and nausea, and it is one of the oldest essential oils known. It has been reported by Tisserand to relieve nausea (Buckle, 1997). Clove (*Eugenia caryophyllata*) was recommended by Abdel-Aziz and was listed in Potter's New Cyclopaedia of botanical drugs and preparations as antiemetic (Wern, 1988).

Heartburn was also a common complaint among women in the present study. This may be attributed to pregnancy hormonal effect and may be due to the fact that the type of food those women ate during pregnancy. In Egyptian villages, people eat more salted cheese with hot pepper which may cause heartburn. This result was in line with Melokhia (1986) who found 86% of her studied subjects complained from heartburn.

On exploring women's practices to relieve heartburn, the result of the present study revealed that the majority of them did harmful practices in the form of eating green fenugreek or lettuce, vicia faba (crushed bean) or lupinus, drinking sodium bicarbonate melt in water and taking antacid without any prescription. These findings are higher than those reported by Shama (1990) who mentioned that the minority of her subjects did so. This dissimilarity of results may be due to the differences in culture between the rural and urban areas in Mahalla and Alexandria. Gruenwald et al. (1998) added that lettuce is supposed to have a narcotic effect, while fenugreek reduces blood sugar level so its use is not recommended during pregnancy. *Lupinus luteus* overdose have symptoms of poisoning including

excessive salivation, vomiting, dysphasia, cardiac rhythm disorder, ascending paralysis and possible death through respiratory failure. The intake of large quantities of raw or only briefly cooked seeds *Vicia faba* by individual especially those who have genetic defect lead to glucose-6-phosphate dehydrogenase-deficiency, vomiting, diarrhea, feelings of vertigo and acute hemolytic anemia with fever, hemoglobinuria, oliguria and anuria (fauvism). Elevation in blood pressure is also a possible problem. Dipiro et al. (2002) stated that sodium bicarbonate dissolved in water lead to potential electrolytes and fluid abnormalities in mother and fetus. Moreover, Katz and Castell (1998) had mentioned that adverse reaction associated with excessive use of antacid include diarrhea and metabolic and electrolyte alteration as hypercalcemia, hypermagnesemia, and hypophosphatemia. Furthermore, magnesium contains antacid thus, should be avoided in the late stage of pregnancy because of the theoretical potential for magnesium alter labor. Stephen et al (1999) added that pregnant or lactating women should not use antacids without prescription.

Considering useful practices to relieve heartburn, the results of the present study revealed that more than half of the studied subjects performed them in the form of increasing warm milk intake, taking yogurt, avoiding sleeping after meal and decreasing or refraining from eating greasy, spicy and fried foods in order to relieve heartburn. This may be due to the availability of milk and milk products in rural areas as most of the women who live in rural areas rear cows or buffalo in their houses. These results come in agreement with the study of Goweid and Gamal El-Deen (1990) who mentioned that milk intake was effective in cases of heartburn. On the other hand, women should decrease or refrain from eating greasy and spicy foods to relieve gastrointestinal disorders during pregnancy especially heartburn.

Regarding constipation, the result of the present study clarified that most of the studied subjects had this complaint during pregnancy. This result was expected as pregnant women during early pregnancy experience nausea and vomiting so they likely decrease their fluid and food intake to manage morning sickness. A study done by Anderson on pregnant women from Israel and England demonstrated that 11.0% and 38.0% of pregnant women respectively in these countries identified themselves as being constipated (Fraser, 2003).

Dealing with women's practices to relieve constipation, the result of the present study revealed that the majority of the studied subjects performed harmful practices to relieve this discomfort in the form of using rolled oily paper (paraffin oil) as anal lubricant, using piece of soap as anal suppository, drinking castor oil, drinking boiled rupture-wort, taking laxative (without any prescription), eating fenugreek seeds and using enema. These findings were expected as the majority of the studied subjects were housewives and depended on natural materials which were available at home and these materials may be recommended by TBAs. MC Cann et al. (2004) refused these practices as they mentioned that mineral oil interferes with absorption of fat-soluble vitamins (A, D, E, and K) which are necessary for fetal growth. A rolled oily paper may also irritate rectum and make trauma. Applying soap as an anal lubricant or suppository is harmful and should never be used. Since this practice can lead to rectal

irritation and burning sensation (Pillitteri, 1994). Moreover drinking castor oil was disagreed upon from Creasy et al (2004) who stated that it had a potential adverse maternal and fetal effect, as it might induce labor or abortion. Hussein (1985) mentioned that rupture-wort is a strong purgative but it is very irritating to the stomach. This plant produces nausea, vomiting, heart depression and coldness of extremities. Eating fenugreek seeds to relieve constipation is in line with Boulos (1983) who reported that fenugreek seeds have a tonic and laxative effect and help to relieve constipation. On the other hand, Gruenwald contradicted this practice as he denoted that fenugreek should be contraindicated during pregnancy as it might reduce blood sugar level (Hassan, 2019). Taking mild laxatives or suppositories without prescription was not in congruence with Grodner (2004) who mentioned that prolonged use of laxative should be held responsible for some cases of chronic constipation and other intestinal disorders. The patient might start to depend on the psychological effect and physical stimulus of the drug rather than on the body's own natural reflexes. Furthermore, Katzung (1995) added that laxatives could cause dehydration, electrolyte imbalance and dependency if used chronically. The excess activity of the colon might result in nausea, diarrhea or vomiting. As regards the use of enema for evacuation, it was in congruence with Shama (1990) and El-Bannany (1991). Nevertheless, it was not in congruence with Novake who stated that soap enemas were particularly irritating. He added that injudicious use of enema could cause electrolyte imbalances or colonic perforation (Berek, 1996); in addition; enema might initiate labor through its action (Mc Cann et al., 2004).

Useful practices to relieve constipation were reported by slightly more than one-third of the studied subjects. It involved increasing intake of chicory, vegetables, and fruits as well as increasing intake of fluid, milk and yogurt to overcome constipation. This was expected since all the studied subjects live in the rural area where the fresh vegetables, milk and milk products were available. Similar results were also reported by many researchers (Gowayed et al, 1990; El-Bannany, 1991). Hussein stated that chicory was believed to be a mild laxative, carminative, tonic, demulcent and appetizer (Hussein, 1985). Novake emphasized that increased fluid intake and high fiber diet should be considered as conservative measures to manage constipation (Berek, 1996).

Backache was also quite commonly encountered among pregnant women. Although backache could result from laxity of connective tissue and ligaments during pregnancy, rural females were more liable to exaggerate their pain as most of them live in extended and large families which might increase the burden on women in caring for many persons as well as they assisted in their husbands' farms. Same findings were mentioned by Attia et al. (1999) who reported that 84.6% of pregnant women were more prone to severe low back pain. This was also in line with Larsen (1999) and Franklin and Kerr (1998) who emphasized the fact that females pass through physiological changes associated with pregnancy. These might help in decreasing elasticity and strength of back muscles as the result of an added weight and hormonal changes.

As regards women's practices to relieve their backache, the result of the present study revealed that the vast majority of women were more likely to perform harmful practices in the form of using container of

earthenware (air cups), Alhajamah, cautery for painful area (wasm), using pharmacological measures without any prescription and drinking boiled thyme. This finding was expected since more than two-fifths of the studied subjects were illiterate or just read and write so they had depended on the inheriting method to relieve backache. In addition, the use of alhajamah and cautery (wasm) were old habits that make women vulnerable to infection as they were usually done not under aseptic technique which leads to sepsis, besides pain and discomfort. Moreover, Abuzeid (1993) stated that numerous studies on pregnancy had shown the expectant mothers were taking drugs without a doctor's order to treat any complaint. This was a serious problem as ingestion of drugs, at any time of pregnancy would hold danger for fetal damages, elaborated that many drugs are deleterious and might contain elements noxious of the fetus. In addition, Blumenthal et al. (2000) stated that thyme should not be used internally during pregnancy. This was not in accordance with Hussien (1985) who mentioned that if it was applied externally by compresses for back it would be effective due to its weak anesthetic effect. Using air cups to relieve backache was a traditional method that was based on the fact of negative pressure, where the cups had to be evacuated from the air by the action of flamed gauze. So the pressure inside the cup would become lower than the pressure inside the body leading to decreased humidity in the body and consequently relief the backache. In addition, this reaction was not related to backache that results from pregnancy as it was caused by the laxity of connective tissue and ligament, particularly the pelvic joint and sacroiliac joints. The alteration in the center of gravity and contour of the body would be other causes.

Useful practices in relation to backache were performed by more than three-fourths of the studied subjects in the present study. They were in the form of sleeping assuming a comfortable position on the back on firm surfaces, taking a frequent period of rest during the day, applying binders for the back, making back rub (massage), drinking boiled *Annonamuricata* and using camphor oil as a hot compresses on their back. Heiba (2001) and Topozada (1995) found the same in relation to lying on the back. Smeltzer et al. (2000) added that changing position slowly and frequently was helpful in relieving backache. Moreover, back rub had improved blood flow through vasodilatation, promoted muscle relaxation and reduced pain transmitters from the area of pain with resultant of pain relieve as mentioned by Potter and Perry (2001) and Linderman and Mc Athic (1999). In addition, applying binder was helpful to create pressure over the back and provided warmth that leads to relieve backache (Potter, 2001). Furthermore, applying hot compress by camphor oil and drinking boiled *Annonamuricata* were helpful for relieving backache. Camphor is ketone obtained from *Cinnomomumcamphora*. It is used three or four times daily in topical preparation containing a concentration of 0.1% to 3.0%, which depresses the cutaneous receptor providing topical analgesic and local anesthetic effects. Moreover, dried leaves of *Annonamuricata* when boiled in hot water and taken orally were believed to be also effective as a sedative (Robbers & Tyler 1999).

The result of the present study revealed that most of the studied subjects complained from leg cramp. This might be due to that all the studied subjects were multipara which might be the reason that leads to

an increase in calcium and phosphorus consumption and in turn lead to leg cramps. Contrary to this result, the study that was done by Heiba (2001) who found that a minority of women complained of leg cramps.

Leg cramps were managed harmfully by the majority of women in the present study through applying tight pressure by cloth on the affected leg, making venous puncture to release bad blood (as mentioned by women) from the painful area, putting the affected leg in warm water and heavy salt and taking analgesic without any prescription. The need for immediate relief of pain would explain why women took medications to relieve their discomfort which accompanied leg cramps. Venous puncture which exposed mothers to bleeding, tighten pressure on affected leg that interfered with peripheral circulation, using water with salt irritates skin and alters electrolyte balance this was in accordance with Morgan & Hamilton (2003) who denoted that constrictive clothing and excessive sodium might contribute to abnormal fluid retention and edema in lower limb. As well as self-medication and its complication as mentioned before by Walker and Edward (1999).

Leg cramp during pregnancy was managed usefully by more than two-fifths of women in the present study through massaging the affected leg, elevation of legs on a pillow, avoiding hard work or longstanding, increasing the intake of food rich in calcium, warming affected leg and applying hot fomentations as well as making exercise. This might be due to the fact that the minority of women in the present study were highly educated and working. This result was in congruence with Scott et al. (2003) and De-Cherney and Nathan (2003) who stated that leg cramps can be relieved by a nutritional supplement containing potassium and calcium phosphate. Application of hot fomentation by using a hot water bottle or warm packs to the affected muscle and massage was also recommended by Thompson (1995), Lowdermilk and Perry (2004) and Arulkmaran et al. (2004). Furthermore Morgan and Hamilton (2003) mentioned that deep breathing and leg exercise would be beneficial to prevent leg cramps in pregnancy.

In relation to women's sources of information about traditional practices to relieve minor discomforts, the results of the present study showed that mothers, mothers-in-law, TBAs, friends and neighbors and herbal traders were the common sources for the majority of women, while doctors, nurses and mass media constituted the sources for the minority of them. This was not amazing since all the studied subjects lived in rural areas, were housewives, had large and extended families, were married before the age of 20 years old and had not enough family income. So, they tended to consult older experienced women in the family in relation to the treatment of their minor discomforts. In addition, the majority of the studied subjects received antenatal care in private clinics where there were no health education classes for women as compared with university hospitals and M.C.H centers. This finding was partially emphasized by Gaddala (1978) who mentioned that women in urban areas usually had better access to antenatal care services than those from rural areas. They were more likely also to contact health professional personnel at regular intervals to discuss any reproductive health problem. This finding also shed light on the absence of formal and informal knowledge of health through which women could

know the realities surrounding their health condition. This might also be due to women's lack of communication with health service providers, especially in unpaid or free health services. Moreover, researches assessing knowledge related to different reproductive health issues generally revealed the inadequacy of women's knowledge especially in developing countries (Khattab, 1996). Contrary to this finding a study in United Kingdom by Liburd (1998) revealed that midwives had been identified as the highest sources of information and uses of complementary therapies in the health care services. Moreover, documentation of complementary therapies used in midwifery practices had resulted in some evidence based on practice for reference. He had also claimed that education can play key roles in the integration of complementary therapies into midwifery, providing women with more choices, and achieving greater client satisfaction from the childbirth experience.

Concerning the reasons for preferring traditional practices to relieve minor discomforts by women in rural area, the results of the present study revealed that the majority of women mentioned that those practices were recommended by relatives, had no side effects, easy to use, could do those practices by themselves, cheap, they did not know other methods and did not like medical treatments. These findings were expected since women in the present study were more likely to be illiterate, housewives and from the rural area. They also had large and extended families and have not enough family income. Poverty could lead to increase the usage of traditional practices whether it is due to low income or due to other factors that accompany poverty; as crowding and high parity which had deprived them from knowledge related to proper practices. On the other hand, most of them were reluctant to get medical care as they did not like physical examination, being embarrassed to be assessed, and had not enough money. Therefore many of them relied on traditional remedies recommended by relatives and TBAs (Buckly & Kulb, 1990).

In the present study, the relationship between certain characteristics of pregnant women and the practices they do to relieve minor discomforts was investigated. It was revealed that women's practices to relieve morning sickness and heartburn were significantly influenced by their education. It was also evident from the results that better-educated women had more tendencies to use useful practices, while women with limited educational background had more tendencies to use harmful ones. This was expected since educated women are more likely to have better access to the community health care services and source of information that help in early detection and proper management of minor discomforts during pregnancy. These results were in line with Hassan (2000). It was also mentioned that women who had been educated were open-minded to new ideas (Biennial report, WHO, 1996). In addition; this finding went hand with El-Sherbeni (1998) who emphasized on the importance of education in the prevention and control of maternity health problems. Moreover, education should be a mean that enables women to gain access to knowledge. The more education women received a better contribution to their empowerment. Education of women could also improve the health of the entire family. Women with more education should also be able to control many events in their lives. Thereby, access to education had to be a fundamental human right and a prerequisite to social, cultural and



economic well-being (Rowley, 1992).

The results of the present study also revealed a significant relationship between women's practices to relieve morning sickness and constipation and their occupation. It was no wonder to find housewives more likely to do harmful practices. Since non-exposure of women to work outside the home, would give them chances of contact with more experienced persons and acquire valuable information. This result was congruent with Hassan (2000) who stated housewives who had a lack of awareness about good practices and nutrition during pregnancy and supplementary feeding better among worked one.

Regarding age at marriage of the studied subjects, the results of the present study presented that more than one-third of them married at age less than 20 years. Furthermore, a significant difference was noticed between women's age at marriage and their practices to overcome heartburn. It was not surprise to find that younger women tend to performed harmful practices than older ones. This might be due to the fact that day by day life enhances women's experience and improves their knowledge. This result was considered by Ghulam (1979) who stated that early marriage could have a negative effect on the mother's education, and also her understanding of how to relieve the minor discomforts during pregnancy. This had exposed these mothers not only to ignorance of their practices but also to complications (Gary et al, 1975). This result was supported by the other researches which indicated the fact that early marriage and pregnancy had hindered women to finish their education and to get a good job and had become financially dependent on their family. Therefore, teen mothers were more likely to live in poverty than women who were in delayed childbearing age (Smith & Maurer, 2000). Moreover, delaying age at marriage was a key to improving women's status and may be a way of increasing their leverages in the decision-making process (Ibrahim et al, 1998).

The results of the present study had also revealed a significant relationship between women's practices to relieve heartburn and constipation and their family income. Harmful practices were more prevalent among poor pregnant women as most women were likely lived in large and extended families. This increased family size might reduce the per Capita income and amount of care the mother gained especially during her pregnancy. This would affect badly the mother's health and health practices. This was in accordance with William (1967). Moreover, poverty, type and size of the family might increase the burden on women caring for many persons and striving hard for living. These results were supported by the fourth world conference which denoted that statistics about women and poverty were all too familiar, where women were the majority of 1.3 billion people living in extreme poverty. Those poor women were more likely to live in crowded houses (Waddell, 1995).

Concerning the utilization of antenatal care (ANC) services, it was found that in developed countries, 97% of women received antenatal care as compared to 65% or less in developing countries. In Egypt, nationwide, only 53% of women received antenatal care (WHO, 1997). Antenatal care was not a feature of maternity care until the 20<sup>th</sup> century. There had been substantial progress in the last 20 years toward improving the measurement of ANC utilization. The lack of an established convention for quantitative measurement of adequacy of ANC utilization and the paucity of research data addressing

the comparability of available indices continued to hinder the ability of researchers and policy-makers to draw conclusions from ANC literature (Stewart & Hunts, 2004).

Although many researchers (Alexander & Kotelchuck, 1996; Gilbert & Harmon, 1993; Gant et al., 1993) had emphasized the importance of ANC, further analysis of the results of the present study indicated that only a substantial proportion of the studied subjects had utilized antenatal care services in their previous pregnancy. Yet, more than half of them had visited antenatal clinics less than 4 times. WHO had also emphasized the importance of the antenatal visits during pregnancy, where the woman should visit antenatal clinic 4 times at least during pregnancy (WHO, 1996). These visits would help the health care provider to detect early any problem and treat it properly during pregnancy. It would also help the women to acquire the necessary information about pregnancy, labor, and puerperium (WHO, 1996; Turner et al, 1998). The care or lack of care for women during pregnancy was determined by the influence of cultural and traditional factors. Most communities especially in non-urban tended to adhere to the old local belief of the forefathers that pregnancy and delivery was the province of TBAs. In these communities, the woman occupied a subordinate position in the community. The acceptance or not of modern maternity practices might, therefore, depend on the husband, who might prefer his pregnant wife to assist in his farm or perform household duties rather than to attend maternity clinics (Buekens, 1990). Some traditional and cultural practices not only had prevented a large number of women from utilizing the maternity services but also had harmful effects on them, thus detracting from the value of ANC (Nylander & Adekunle, 1990).

Concerning women's reasons for not seeking the ANC the studied subjects mentioned that they had no health problems during their pregnancies, had lack of awareness about antenatal care services, did not have enough money, they had no decision making power. Also, they had enough experience from their previous pregnancies, did not like medical examination, ANC waste their time as a result of long waiting in the center, difficult transportation and they believed that antenatal follow-up was for high-risk cases only. This might be due to the fact that the majority of women in the present study were illiterate or moderately educated and housewives. These women were not able to make the proper decision whether on how, where, or when to seek medical advice. They were not able also to verbalize their concerns regarding this discomfort. These reasons also mentioned by many researchers (Turner et al, 1998; Salem, 2004). This calls for reducing the cost of antenatal care. Governments and international organizations should collaborate to empower women and strengthen their decision making power within the family and community. More efforts are needed to overcome these barriers through mass media messages, training of services providers both in technical and communication skills as well as the provision of outreach programs for follow up pregnant women (Salem, 2004). These results were support with those of Fatmi and Avan (2002) and Nylander and Adekunle (1990) who reported that inadequate the utilization of antenatal care in developing countries was related to a variety of issues as; the facilities were too distant or too expensive, the utilizers were illiterates, ignorant, had certain prejudice and traditional and cultural beliefs. Hafez et al. (1999) stated that the important factors that

would influence the utilization of antenatal care include autonomy and possession of decision making power, perception about their need for antenatal care and income. In addition, Buekens (1990), as well as Mwaniki and Kabiru (2002) reported that the major constraints for maternity services included a financial barrier, lack of transport, lack of money for transport, lack of knowledge and lack of satisfaction with the quality of care. It was clear that economic considerations played a prominent role in determining the utilization of ANC cost of service which was often cited as a major issue in the provision of preventive care (Kugler et al, 1993; Walsh & Mcphee, 1992). Financial barriers were an important determinate of whether or not a woman received adequate ANC. In USA the uninsured women were at very high risk both of starting care late and having less than the adequate number of visits even when controlling and racial or ethnic group (Poland et al, 1987; Braveman et al., 1993). Moreover, WHO denoted that range of barriers might limit women's access to ANC, including distance, cost, and multiple demands on women's time and poverty (WHO, 1996).

Regarding the relationship between utilization of ANC services by studied subjects in their previous pregnancy and their practices to relieve minor discomforts, it was observed that a significant relationship between the number of antenatal visits done by expectant mothers during their previous pregnancies and their practices to relieve heart-burn and backache. Although Hacker & Moore stressed the importance of follow up during pregnancy, and they mentioned that pregnant women should visit the health care center according to the following schedule, one visit each month through the first seven months, then one time each two weeks through the seventh and eighth month and each week during the ninth month until delivery (Hacker & Moore, 1992). Yet, the result of the present study revealed that almost three-quarters of the studied subjects had visited antenatal clinics irregularly in their current pregnancy. This might be due to the fact that most of the Egyptian women go to the obstetrician or antenatal clinic only to seek treatment to their complaint rather than for periodic follow up. Furthermore, on exploring women's practices to relieve minor discomforts in the present study in relation to their regularity of utilization of antenatal care services according its schedule, significant differences were found between regular utilization of ANC services by the study subjects in their current pregnancy and their practices to relieve morning sickness, heartburn, constipation and leg cramps. Generally, harmful practices were prevalent among women who were irregular ANC follow up since regularity of their visits would have given the chance for women to take healthful knowledge and to correct their harmful practices. This reflects that more efforts are needed to educate pregnant women about the importance of regular antenatal visits and the relationship between regular prenatal care and pregnancy outcome (Farg & Hassan, 2020; Ibrahim, 1991; Mohamed & Hassan, 2020; Hassan et al, 2020).

## 5. Conclusion

It can be deduced from this study that traditional practices among pregnant women to relieve common minor discomforts during pregnancy in the rural area tended to be more harmful than useful ones. Investigation of pregnant women's practices was an attempt to highlight the importance of such an issue for the maternity nurse who would be the cornerstone in women's health promotion activities. Moreover, identifying the various influential factors affecting their practices could lead to increase women's awareness about this topic by the target women. In conclusion, the findings of this study indicated that practices of women to relieve their common minor discomforts were affected by their education, occupation, age at marriage, income, number, and regularity of ANC.

## 6. Recommendations

*Based on the findings of the present study, the following recommendations are suggested:*

- Continuous education and training programs about pregnancy and its accompanied minor discomforts should be conducted for physicians, nurses, midwives, and TBAs to manage minor discomforts correctly.
- Health education program for women should be developed to raise their awareness about the physiology of pregnancy and useful practices during pregnancy.
- Measures to combat women's delay in initiation antenatal care services should be taken.
- Further research to clarify the magnitude of the problem in Egypt as a whole and to find out the suitable solution for it.
- Study the effect of comprehensive nursing care and outreach program on women's practices to overcome minor discomforts.

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